



Ahmedabad
University

Master of Science

QUANTITATIVE
FINANCE

About Ahmedabad

Ahmedabad University is a private, non-profit research university that offers students a liberal education focused on interdisciplinary learning and research thinking. We are committed to the discovery of new ideas, and to the belief that good theory results in good practice. We mould independent thinkers and compassionate leaders who go on to engage innovatively with the complex challenges of our societies. Ahmedabad University was established in 2009 by the Ahmedabad Education Society to offer a world-class academic experience in one of India's most vibrant cities. With a centrally located campus and internationally renowned faculty, it offers one of the most stimulating academic environments in the country.

About Amrut Mody School of Management

The mission of the School is 'to advance the understanding of the practice of Management through interdisciplinary enquiry, and building ideas from there to prepare responsible leaders who understand the context, are innovative, and believe in a sustainable world'. The School offers wide-ranging, multi-faceted programmes, from Undergraduate, Graduate, and Doctoral degrees, and short-term certificate programmes for working professionals and other practitioners.

The Campus is in the heart of Ahmedabad, one of India's most vibrant and historic centres of commerce. Its mercantile and industrial history underscore its present-day reputation as a hub of enterprise and new business ideas. In addition to its bustling streets, markets, and sophisticated cultural life, the city is also home to many of India's most reputed educational institutions, making it uniquely liveable for students and academics.

The School works closely with industry partners to provide a balance between rigorous practice and strong conceptual education. Moreover, it strives to bring interdisciplinary inputs and liberal perspectives to management students to develop solutions to contemporary problems. The School continuously fosters entrepreneurial thinking that might transform tomorrow's business and society.





Masters Programme in Quantitative Finance

The Master of Science in Quantitative Finance programme, as envisioned by the Amrut Mody School of Management at Ahmedabad University, is a unique programme in the country for it focusses on imparting advanced quantitative techniques that is required for students who are intent on pursuing a career in Financial Modelling, Asset Management, Risk Mitigation, and Investment Banking. Unlike specialised programmes that are offered in silos, the MS-QF programme at Ahmedabad University offers ample avenues to the students to make the most out of the broader liberal arts university ecosystem that encourages and nurtures interdisciplinarity.

The MS programme in Quantitative Finance is a fully-residential two-year post-graduate

programme offered by Amrut Mody School of Management of Ahmedabad University. This programme is a confluence of mathematics, financial markets, and economics. The contents and the depth of the courses offered in this programme have been arrived at keeping in view the demands and the expectations of industry. Graduating students are expected to have a deep understanding of the mathematical underpinnings of financial markets. They should possess requisite coding skills and should be in a position to apply the quantitative techniques in real-world context to address empirical anomalies. The pedagogy consists of, not limited to, faculty led classroom discussions, simulation exercises, case analysis/group activities, workshops, and practitioner interactions.

Programme Uniqueness

This programme is unique when compared to similar kinds of programmes offered by prestigious institutes in India and abroad in the following ways:

- The programme is geared towards making students internalise economics and functioning of financial markets and its mathematical underpinnings in a holistic manner.
- The programme provides a strong background in programming with applications in finance.
- The programme brings to the forefront Ahmedabad University's enduring commitment to interdisciplinarity approach as it offers a wide basket of electives for student to choose from based on their area of interest and career plans.

Course Structure

The Master of Science programme in Quantitative Finance is a full-time two-year post graduate programme split across four semesters. In all, a student requires to complete 73 credits. This includes 10 core courses in year one, a mandatory summer internship of six to eight weeks, mandatory foundation modules that run throughout the first academic year and at least 10 electives in year two.

Foundation Module	Programming using R and Python; Communication and Writing Skills; Modelling for Managerial Decision
Programme Core	Microeconomics ; Macroeconomics; Quantitative Methods I; Mathematics for Economics and Finance; Foundation of Finance and Financial Markets; Macroeconomics II; Econometrics; Quantitative Methods II; Security Analysis and Portfolio Management ; Corporate Finance; Applications of Machine learning
Disciplinary Core	Financial Derivatives; Risk Management; Mergers, Acquisitions, and Private Equity; Financial Time Series Analysis; Fixed Income Securities and its Derivatives; Asset Pricing; Research in Quantitative Finance; Technical Analysis
Summer Internship	
Disciplinary Electives	Behavioral Economics; International Trade; Policy Evaluations; Game Theory; Stochastic Process; Data and Ethics; International Finance; Fintech and Financial Services; Financial Analytics; Network Theory; Algorithmic Trading; Information Economics; Environmental Economics; International Macroeconomics; Public Economics; Game Theory II

Programme Objective

The programme offers strong theoretical foundations of mathematical finance in general and financial markets in particular. The programme comprises of a set of core and elective courses with focus on computational finance. The core courses are designed to build a strong foundation for the students based on which they can choose from a diverse pool of electives matching individual interests. Along with advanced techniques in finance, the courses on economics and analytics offer the right blend for making this a unique programme.

The programme requires all students to successfully complete an internship, duration of which is between 6-8 weeks at the end of the first academic year.

Learning Outcomes

On successful completion of the programme, a student is expected to have both strong theoretical as well as empirical understanding of the subject. Further, the internship will expose students to applying the knowledge gained in real life and thus, build a bridge between theory and practice. As a part of the curriculum, students will also acquire proficiency in relevant programming techniques that are key ingredients for a successful future career.

Career Prospects

Upon successful completion, the graduating students would possess the technical know-how and the requisite skills that would enable them to contribute meaningfully in the following areas and in turn make a difference.

- Quantitative analyst
- Investment banking
- Advisory and consulting services
- Credit rating agencies
- Derivatives and Risk Management
- Treasury operations

The Career Development Centre (CDC) at Ahmedabad University is geared towards forging active and meaningful connections between industry and our graduating students. MSc QF students would be in a position to tap such active connections to obtain summer internship at the end of the first year. For final placement, Ahmedabad University in general and CDC in particular would facilitate by honing the skill set of the student and by making them career-ready on the technical and technological fronts. Graduating students are expected to invest time to make the best out of the available ecosystem.



Eligibility Criteria

The candidate must hold a Bachelor's Degree, with at least 50% marks or equivalent CGPA, awarded by any University or educational institution as incorporated by an Act of Parliament or State legislature in India or declared to be deemed as a University under Section 3 of the UGC Act, 1956, or possess an equivalent qualification recognised by the Ministry of HRD, Government of India. The percentage of marks obtained by the candidate would be calculated based on the practice as followed by the respective University/Institution. In case of grades/CGPA, the conversion to percentage of marks would be based on the procedure as certified by the respective University/Institution. If any University/Institution confirms that there is no scheme for converting CGPA into equivalent marks, the equivalence would be established by dividing the candidate's CGPA by the maximum possible CGPA, and multiplying the result with 100. Candidates appearing for the final year of Bachelor's degree/equivalent qualification examination and those who have completed degree requirements and are awaiting results can also apply. However, it may be noted that such candidates, if selected, will be allowed to join the programme provisionally, only if they submit a certificate from the Principal/Registrar of their University/Institution stating that they have completed all the requirements for obtaining the Bachelor's degree/equivalent qualification on the date of the issue of the certificate. Ahmedabad University may verify eligibility at various stages of the selection process. Candidates should note that the mere fulfilment of the minimum eligibility criteria would not ensure consideration for shortlisting.

Selection Process

Candidates may apply to the Programme based on their CAT/XAT/GMAT/GRE/GATE scores. Additionally, potential applications who have not taken any of the earlier mentioned tests can also take the AMSOM test. All shortlisted candidates would be called for a personal interview. Personal Interactions of the shortlisted candidates will be scheduled within 10 days from the last date of Applications.

The University will offer admission to the candidates who meet its standard performance requirements across all the selection components, as defined by the Admissions Committee, and as approved by competent authorities.

Admission Procedure

Eligible candidates must apply in the prescribed online form with payment of application fee of INR1200 (inclusive of GST). Duly filled application form along with the application fee can be submitted before the application deadline.

Fee Structure

Please refer to the website for the Fee Structure <https://shorturl.at/hkD79>

This is mandatorily a fully residential two year Programme and students would be provided accommodation on twin-sharing basis. The boarding and lodging expenses would be around INR 1,70,000 per annum.

Financial Aid, Scholarships and Fellowships

- All students will receive tuition support of INR 75,000 per year.
- Students needing additional financial assistance can opt for a Fellowship, for which they are required to do a Teaching Assistantship under a faculty member assisting them in teaching.
- For students choosing the Fellowship option, the tuition support would increase to INR 1,25,000 per year, thus reducing their annual tuition fees by 50% to INR 1,25,000 per year.

Representative List of Faculty at Amrut Mody School of Management

- **Devanath Tirupati**
Executive Provost
PhD (Massachusetts Institute of Technology)
Expertise:
Supply Chain Management
Operations Research
- **Parag Patel**
Senior Associate Dean and Associate Professor
Amrut Mody School of Management
PhD (Gujarat University)
Expertise:
Accounting, Financial Services, Equity Investment Decisions
- **Abhinandan Sinha**
Assistant Professor
PhD (Indian Statistical Institute, Kolkata)
Expertise:
Development Economics, Political Economy
- **Gaurav Bhattacharya**
Assistant Professor
PhD (Jawaharlal Nehru University)
Expertise:
International Trade, Energy, Environment and Climate Change, Political Economics
- **Poonam Dugar**
Assistant Professor
PhD (Gujarat University), FCA
Expertise:
Accounting, Taxation and Venture Capital/ Private Equity
- **Tanya Jain**
Assistant Professor
PhD (Indian Institute of Management Bangalore)
Expertise:
Financial Economics, Innovation, Economic Growth
- **Samarth Gupta**
Assistant Professor
PhD (University of Boston)
Expertise:
Industrial Organisation, Development Economics, Financial Inclusion
- **Supratim Das Gupta**
Assistant Professor
PhD (University of South Carolina)
Expertise:
Resource and Environmental Economics, Energy Economics, Real Options, Macroeconomics
- **Narendra Nath Kushwaha**
Assistant Professor
PhD (IIM Tiruchirappalli)
Expertise:
Related Party Transactions, Auditing, Earnings Management, Operational Risk in Banks
- **Vinodh Madhavan**
Programme Chair and Associate Professor
PhD (Golden Gate University, San Francisco)
Expertise:
Nonlinear Time Series Analysis, Long Memory, Adaptive Market Hypothesis
- **Moumita Roy**
Assistant Professor
PhD (George Mason University)
Expertise:
Applied Microeconomics, Experimental Economics, Behavioral Economics, Political Economy, and Development Economics
- **Rahul Singh**
Assistant Professor
PhD (IIM Bangalore)
Expertise:
International Trade, Industrial Organisation and Development Economics
- **Ishita Tripathi**
Assistant Professor
PhD (Louisiana State University)
Expertise:
Microeconomics, Cultural Economics, Political Economics, Crime, Law and Economics
- **Vibha Tripathi**
Assistant Professor
PhD (Gujarat University)
Expertise:
Corporate Accounting, Management Accounting, IFRS Convergence, Capital Structure of Companies, Financial Restructuring
- **Pallavi Vyas**
Associate Professor
PhD (University of Chicago)
Expertise:
Labor Economics, Human Capital Theory, Public Health, Gender and Discrimination

The complete list of Faculty at Amrut Mody School of Management, Ahmedabad University can be viewed at: www.ahduni.edu.in/amsom/faculty





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